

# Energy News




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## Energy News Overview

The Energy Information Administration released two reports of interest this month, which at first glance might seem to contradict each other or be mutually exclusive. The first report revealed that the U.S. energy related carbon dioxide emissions had declined 3.8% in 2012 relative to 2011 and were at their lowest level since 1994. Emissions have declined five of the last seven years. Due to higher prices and numerous efficiency policy measures, the U.S. is using less energy despite a growing population. The other EIA report indicated that the U.S. would become the world's largest combined oil and natural gas producer in 2013, overtaking Russia with whom it was virtually tied with in 2012. See articles on page 5 and charts on page 8. The U.S. has long been the world's leading energy consumer but it was also the largest energy importer. New oil and natural gas production is rapidly displacing U.S. imports of these fuels, and natural gas is also replacing coal in the power generation sector. Consequently it is possible for U.S. fossil fuel production to increase while overall energy consumption and related carbon dioxide emissions continue to decline.

The Dept. of Energy, NASEO and EIA had to reschedule their annual Winter Fuel Outlook Conference due to the inopportune government shutdown. It is now scheduled for Nov. 1. EIA had prepared and released its forecast prior to the mid October government shutdown. That forecast indicated that heating costs for most households are projected to rise this winter. Natural gas prices have rebounded a bit from the very low levels of 2012 and early 2013, and electricity and propane prices have also inched up slightly. Heating oil is the only major heating fuel whose price is projected to decline this winter. The report can be found at: <http://www.eia.gov/forecasts/steo/report/winterfuels.cfm>

At the state level the Climate Legislative and Executive Workgroup (CLEW), a group tasked with recommending a series of state actions to reduce greenhouse gas (GHG) emissions, convened public meetings in Spokane (Oct. 16) and Seattle (Oct. 23). The CLEW has reviewed and refined analytical work, prepared by a consultant with assistance from state agencies, detailing approaches to reducing GHG emissions in WA. A summary is available at:

[http://www.governor.wa.gov/issues/economy/climateWorkgroup/documents/CLEW\\_Task4FinalEvalSummary\\_slides.pdf](http://www.governor.wa.gov/issues/economy/climateWorkgroup/documents/CLEW_Task4FinalEvalSummary_slides.pdf)

At the public meetings the CLEW received comments from interested citizens and organizations, most of whom seemed to support the concept of reducing state GHG emissions.

A public hearing was held in Tacoma on Oct. 16 to take comments regarding the proposed Millennium coal terminal near Longview. The terminal, if constructed, would export 44 million tons of Powder River Basin coal per year and require 16 daily train trips to deliver the coal. About 900 people attend the hearing convened by the Dept. of Ecology, Cowlitz county, and the U.S. Army Corp of Engineers, who are the regulators for this project. Four other hearings have been held throughout the state and over 50,000 comments have been given.

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# What's Happening in the Energy Office

## Washington's Future Energy Conference

The 4th annual Washington Future Energy Conference was held October 30th at SeaTac. The State Energy Office and Northwest Environmental Business Council hosted the day-long event. The conference has become the state's must-attend clean energy event. It provides an unmatched forum for learning, networking, and business development – bringing together those engaged or interested in the new energy economy. This year's conference theme was “building markets in the state clean energy sector” and we held four tracks: The Context for Clean Energy in Washington; The Business of Renewable Energy; The Business of Energy Efficiency; and New Fuels for Transportation. We had over 300 attendees, representing a broad spectrum from the public and private sectors, and the ending round table had well over 100 participants.

## Climate Legislative and Executive Workgroup (CLEW)

The Climate Legislative and Executive Workgroup is charged with recommending a state program of actions and policies to reduce greenhouse gas (GHG) emissions, that if implemented would ensure achievement of the state's 2020 and 2035 emissions limits (see RCW 70.235). The CLEW has met eight times to discuss climate policy and is scheduled to meet four more times, including a public meeting on Dec. 6. Two public meetings (Seattle and Spokane) were held Oct. 15 and 23 to gather stakeholder input. The consulting firm Leidos (formerly SAIC) has been providing much of the analytical work and policy analysis for the CLEW process. The Departments of Commerce and Ecology have assisted Leidos in developing greenhouse emission forecasts and in making estimates of policy outcomes. See link for details:

<http://www.governor.wa.gov/issues/economy/climateWorkgroup/default.aspx>

## Petroleum White Paper

The Energy Office has updated its 2006 petroleum paper. Petroleum is the most common primary energy source globally, in the United States, and Washington State. It supplied 33 percent of world, 36 percent of U.S., and 46 percent of Washington's primary energy needs in 2011. Refined products derived from petroleum are primarily, but not exclusively, used for transportation purposes and are essential for our modern, mobile way of life.

This paper presents an overview of petroleum in the United States and Washington State, including:

- Global, U.S., and Washington historical and forecast primary energy and petroleum consumption;
- U.S. and Washington consumption of refined petroleum products;
- Petroleum resources and consumption;
- Refining, and transport of petroleum and refined products;
- Price volatility in the petroleum and refined product markets;
- Petroleum product prices and expenditures;
- Greenhouse gas emissions associated with petroleum consumption;
- Emerging replacements for petroleum products; and
- Federal and state policy activities

See link for details: <http://www.commerce.wa.gov/Programs/Energy/Office/Pages/NewEnergyReports.aspx>

## Clean Energy Fund Updates

The Energy Office has posted the **Federal Grant Matching** Component guidelines and application.

<http://www.commerce.wa.gov/Programs/Energy/Office/Pages/CEF-federal-match.aspx>

The **Energy Efficiency and Solar Grants** for Public Buildings has published their program guidelines.

<http://www.commerce.wa.gov/Documents/EE-solar-guidelines-faq-2013v5.pdf>

**Smart Grid Grants** to utilities has posted draft application guidelines. They are accepting comments by November 4th.

<http://www.commerce.wa.gov/Programs/Energy/Office/Pages/Smart-Grid-Grants.aspx>

# Electricity, Petroleum & Natural Gas Prices

## Energy Price Overview

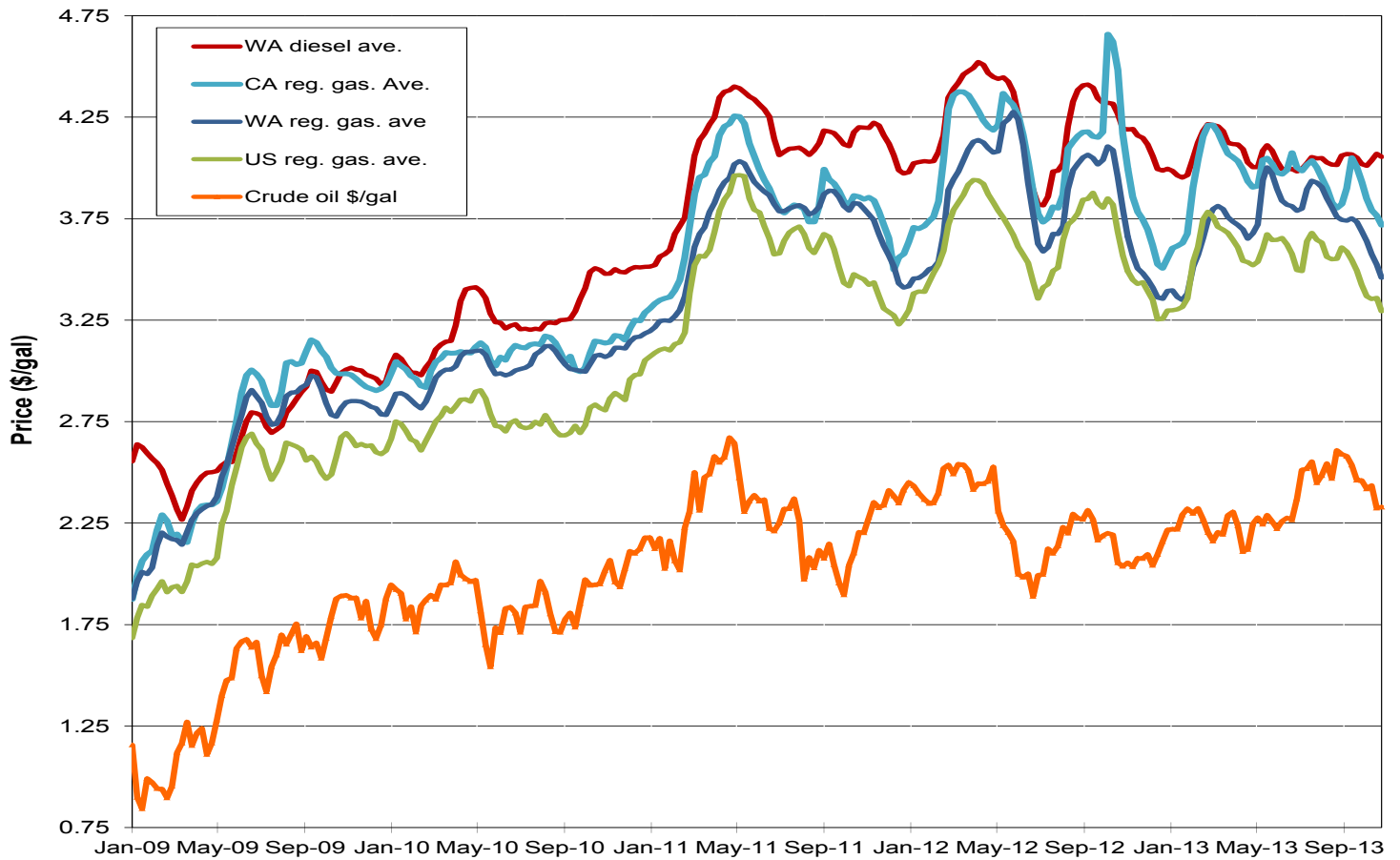
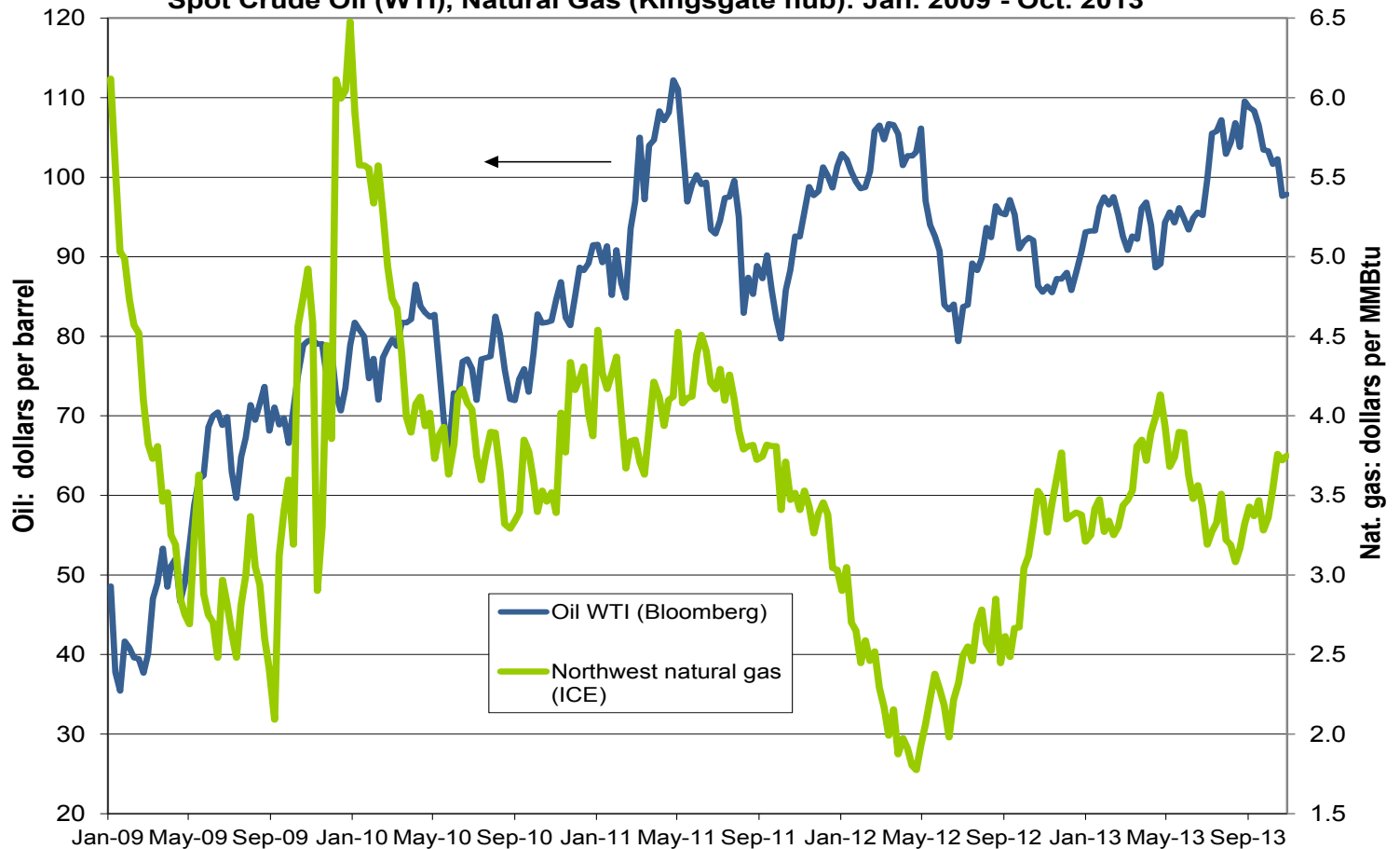
The price for West Texas Intermediate crude oil continued the decline that began in September, ending the month of October in the \$96-98 per barrel range. The same factors noted before are at work: reduced Mideast tensions, high inventories, increasing U.S. oil production and modest global growth in demand. A number of energy analysts are predicting crude oil prices in the \$75-85 range during the winter months, which would significantly reduce expenses for consumers. Persistent lower oil prices would ultimately reduce drilling activity in the new U.S. shale oil fields and the Canadian oil sands since their production costs range from \$70-90 per barrel. U.S. refineries operated at a lower rate of 86 percent of rated capacity during October, reflecting a seasonal decrease in gasoline demand.

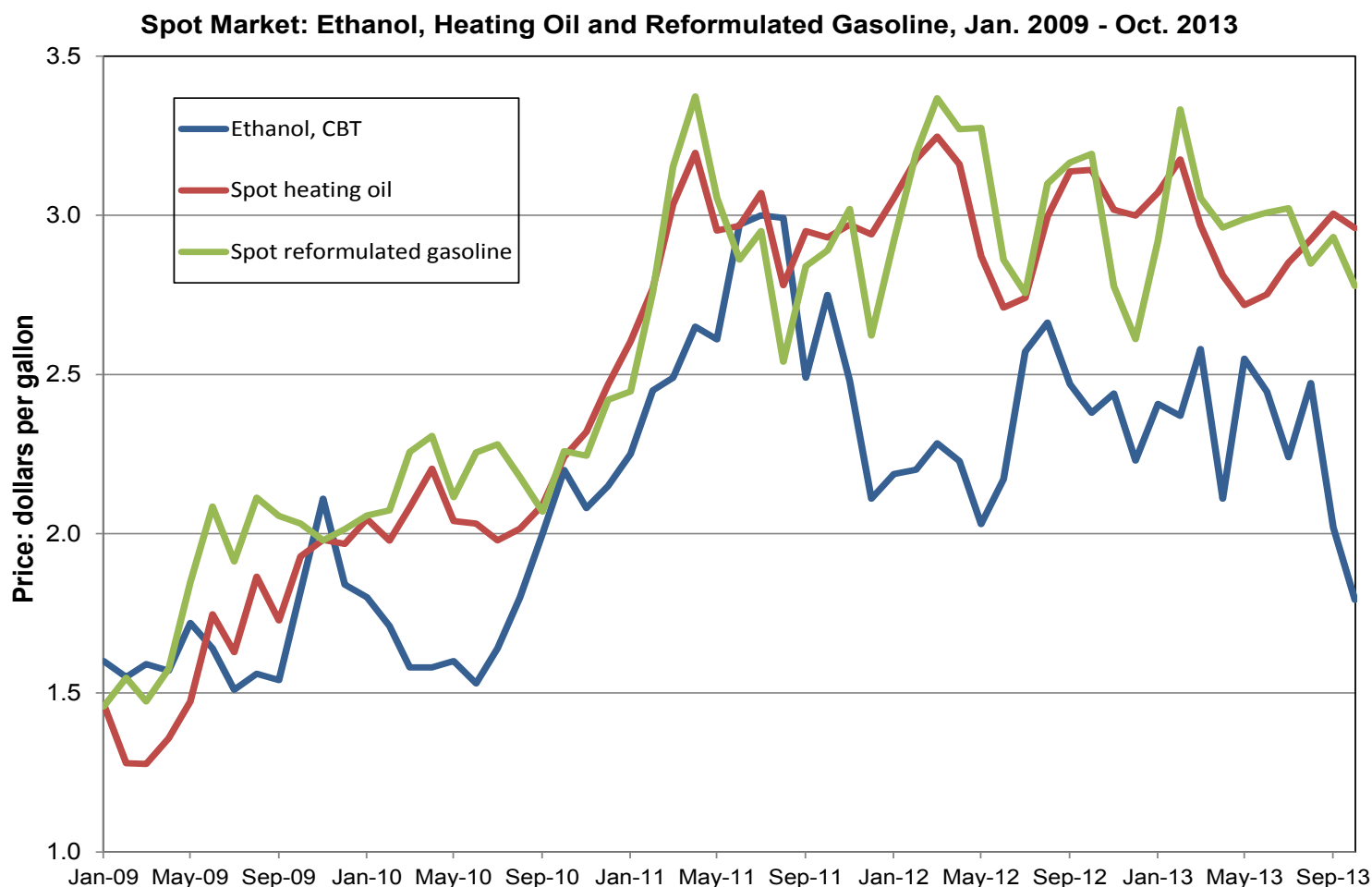
During the last week of October U.S. gasoline and diesel prices averaged \$3.29 and \$3.87 per gallon respectively: 28 and 16 cents per gallon lower than at this time last year. Washington state gasoline and diesel prices averaged \$3.45 and \$4.05 per gallon respectively: 35 and 14 cents per gallon lower than last year at this time. Because of refinery problems, fuel prices in Washington state and the rest of the west coast were unusually high in Sept. and early Oct of 2012. The national per gallon price differential between gasoline and diesel (currently 58 cents/gallon) is larger than was seen in 2012 or 2011 (about 25 cents/gallon). This is likely the result of continuing declines in U.S. demand for gasoline, as more efficient light duty vehicles replace older units, and the increasing global demand for diesel fuel.

The price for front month (one month ahead) NYMEX natural gas was \$3.71 per MMBtu, 25 cents higher than the price seen a year ago. Locally natural gas spot price at Kingsgate was \$3.75 per MMBtu, up nearly 40 cents from the same Sept. spot price. Nationally there was natural gas storage injection of 38 Bcf. Gas storage levels are 3,779 Bcf about 1.6% above the 5-year average. Gas storage in the West is running 9.5% above the 5-year average.

Regional electricity prices are largely unchanged since last month's report: Sept. monthly average \$37.8 per MWh versus \$35.3 for the previous month. This is \$8.5 per MWh higher than the Sept. 2012 average spot price.

<b>Energy Price Summary</b>	<b>Current</b>	<b>Month Ago</b>	<b>Year Ago</b>
Monthly Range at Mid-C (Peak: \$ per MWh)	28-44	23-74	NA
Average Mid C price (Peak hours \$ MWh)	37.8	38.3	29.3
Electricity WA Retail: May (cents/kWh)	7.01	7.02	6.85
Natural gas spot price (next day: \$ per million BTU)	3.75	3.28	3.48
Natural gas futures (NYMEX next month: \$ per million BTU)	3.71	3.63	3.27
E85 (national average: \$ per gallon gasoline)	3.57	3.77	4.21
Ethanol (CBT next month contract: \$ per gallon)	1.79	2.02	2.38
Corn (\$ per bushel)	4.30	4.52	7.42
Petroleum, West Texas Intermediate: (\$ per barrel)	97.8	103.4	85.6
Seattle gasoline price (\$ per gallon)	3.49	3.75	3.83
Gasoline futures (NYMEX next month: \$ per gallon)	2.63	2.84	2.87
State diesel price (\$ per gallon)	4.05	4.05	4.19
Heating oil futures (NYMEX next month: \$ per gallon)	2.96	3.11	3.18
U.S. residential propane price report (reported Oct.-Mar.)	2.41	NA	2.39
<b>Clean Cities: Alternative Fuel Price Report, July 2012</b>	<b>US Avg current</b>	<b>West Coast last qtr avg</b>	<b>West Coast current qtr</b>
Ethanol E85 (\$ per gas gallon equiv. )	4.55	4.98	4.79
Biodiesel B20 (\$ per diesel gallon equiv.)	3.97	4.44	4.21
Biodiesel B99-100 (\$ per diesel gallon equiv.)	4.61	4.86	4.81
Compressed Natural Gas (\$ per gas gallon equiv. )	2.14	2.46	2.43
Propane (\$ per gas gallon equiv.)	5.20	4.18	4.13

**Retail Gasoline and Diesel Prices: Jan. 2009 - Oct. 2013****Spot Crude Oil (WTI), Natural Gas (Kingsgate hub): Jan. 2009 - Oct. 2013**



## Energy Headlines - If you only have time to read a few articles—read these.

West Coast Climate Action Plan: A Carbon Tax? Seattle PI, Oct. 28.

<http://blog.seattlepi.com/seattlepolitics/2013/10/28/west-coast-climate-action-plan-a-carbon-tax/>

Coal Terminal Hearing Draws 900. Vancouver Columbian.

<http://www.columbian.com/news/2013/oct/17/coal-terminal-hearing-draws-900/>

U-S Carbon Dioxide Pollution Down 3.8 Percent. Associated Press.

<http://www.thenewstribune.com/2013/10/21/2849230/us-carbon-dioxide-pollution-down.html>

The Problem with California's Energy Storage Mandate. The Energy Collective.

<http://theenergycollective.com/robertwilson190/291701/problem-californias-energy-storage-mandate>

Washington State: The Truth about Carbon Pricing. Sightline Daily.

<http://daily.sightline.org/2013/10/23/the-truth-about-carbon-pricing/>

U-S to Become World's Largest Energy Producer This Year. Memphis Business Journal.

[http://www.bizjournals.com/memphis/blog/morning\\_call/2013/10/us-to-become-worlds-largest-energy.html](http://www.bizjournals.com/memphis/blog/morning_call/2013/10/us-to-become-worlds-largest-energy.html)

Germany Sees Sharp Rise in Energy Subsidy Costs. Associated Press.

<http://www.seattlepi.com/business/article/Germany-sees-sharp-rise-in-energy-subsidy-costs-4895946.php>

Eight states teaming up to sell electric cars. New York Times, Oct. 25.

<http://www.nytimes.com/2013/10/25/business/energy-environment/coalition-of-states-seeks-to-spur-use-of->



## Energy Headlines—continued

Puget Sound Energy to Reduce Electric Rates Slightly. Seattle Post-Intelligencer.

<http://blog.seattlepi.com/boomerconsumer/2013/10/23/puget-sound-energy-to-reduce-electric-rates-slightly/>

Wind Energy Tax Credit Likely Over, But Effect May Not Hurt Like Before. San Antonio Express-News.

<http://www.mysanantonio.com/business/eagle-ford-energy/article/Wind-energy-tax-credit-likely-over-but-effect-4920760.php>

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[http://earthfix.nwpr.org/energy/article/governor-inslees-climate-hearing-in-seattle-draws-/](http://earthfix.nwpr.org/energy/article/governor-inslees-climate-hearing-in-seattle-draws/)

Does Puget Sound Energy Need 20 More Years of Relying on Coal? Crosscut Seattle.

<http://crosscut.com/2013/10/17/energy-utilities/116972/does-puget-sound-energy-need-20-years-relying-coal/>

Is Burning Garbage Green? In Sweden, There's Little Debate. Midwest Energy News.

<http://www.midwestenergynews.com/2013/10/17/is-burning-garbage-green-in-sweden-theres-little-debate/>

Solar Means Business: Top 25 U-S Corporate Solar Energy Users. The Energy Collective.

<http://theenergycollective.com/silviomarcacci/289606/solar-means-business-top-25-us-corporate-solar-energy-users>

Electrical Grid Is Called Vulnerable to Power Shutdown. New York Times.

<http://bits.blogs.nytimes.com/2013/10/18/electrical-grid-called-vulnerable-to-power-shutdown/?partner=rss&emc=rss>

Arizona Utility Tries Storing Solar Energy for Use in the Dark. New York Times.

<http://www.nytimes.com/2013/10/18/business/energy-environment/arizona-utility-tries-storing-solar-energy-for-use-in-the-dark.html?partner=rss&emc=rss>

Environmental Protection Agency Sued to Deal with Ocean Acidification. Northwest Public Radio.

<http://nwpr.org/post/epa-sued-deal-ocean-acidification>

Solar Projects Becoming More Mainstream As Costs Fall. Washington Business Journal.

[http://www.bizjournals.com/washington/morning\\_call/2013/10/solar-projects-becoming-more.html](http://www.bizjournals.com/washington/morning_call/2013/10/solar-projects-becoming-more.html)

European Economic Stability Threatened by Renewable Energy Subsidies. Forbes Magazine.

<http://www.forbes.com/sites/jamesconca/2013/10/20/european-economic-stability-threatened-by-renewable-energy-subsidies/>

Grand Coulee Dam's Third Power Plant Undergoes Refurbishment. Power Engineering.

<http://www.power-eng.com/articles/print/volume-117/issue-10/features/grand-coulee-dam-s-third-power-plant-undergoes-refurbishment.html>

Supreme Court May Fidget with Carbon Formula But Not EPA's Authority. Forbes Magazine.

<http://www.forbes.com/sites/kensilverstein/2013/10/17/supreme-court-may-fidget-with-carbon-formula-but-not-epas-authority/>

Natural gas waits for its moment. New York Times, Oct. 30.

<http://www.nytimes.com/2013/10/30/automobiles/natural-gas-waits-for-its-moment.html>

Cleaner Than Coal? Wood Power Makes a Comeback. Scientific American.

<http://www.scientificamerican.com/article.cfm?id=wood-power-makes-comeback>

Global Warming Will Increase Intensity of El Nino, Scientists Say. BBC

<http://www.bbc.co.uk/news/science-environment-24494398>

## Recent Reports on Energy and Climate Change

Wind Power Technology Roadmap 2013. International Energy Agency, October 2013.

<http://www.iea.org/publications/freepublications/publication/name,43771,en.html>

Fifth Assessment Report. Intergovernmental Panel on Climate Change (IPCC).

<http://www.ipcc.ch/>

First academic study released in EDF's groundbreaking methane emissions series. Environmental Defense Fund, Sept 2013.

<http://www.edf.org/media/first-academic-study-released-edf%E2%80%99s-groundbreaking-methane-emissions-series>

World Bank: 4 Degrees - Turn Down the Heat. Potsdam Institute for Climate Impact Research and Climate Analytics. June 2013.

[http://www-wds.worldbank.org/external/default/WDSP/IB/2013/06/14/000445729\\_20130614145941/Rendered/PDF/784240WP0Full00D0CONF0to0June19090L.pdf](http://www-wds.worldbank.org/external/default/WDSP/IB/2013/06/14/000445729_20130614145941/Rendered/PDF/784240WP0Full00D0CONF0to0June19090L.pdf)

Long-term outlook for nuclear power depends on lifetime of plant, EIA, Apr. 2013

<http://www.eia.gov/todayinenergy/detail.cfm?id=10991>

Environmental Protection Agency 2012 Climate Change Indicators Report.

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Report on the First Quadrennial Technology Review, US Dept. of Energy

<http://energy.gov/downloads/report-first-quadrennial-technology-review>

Understanding Household Preferences for Alternative- Fuel Vehicle Technologies. Mineta Transportation Institute. <http://www.transweb.sjsu.edu/project/2809.html>

Redrawing the Energy-Climate Map. International Energy Agency, June 2013.

[http://www.iea.org/media/freepublications/executivesummary/WE02013\\_Climate\\_Excerpt\\_ES\\_WEB.pdf](http://www.iea.org/media/freepublications/executivesummary/WE02013_Climate_Excerpt_ES_WEB.pdf)

Monthly Energy Review, EIA : <http://www.eia.gov/totalenergy/data/monthly/>

Short-term Energy Outlook, EIA : <http://www.eia.gov/forecasts/steo/>

This Week in Petroleum. EIA, : <http://www.eia.gov/oog/info/twip/twip.asp>

Annual Energy Outlook 2013: <http://www.eia.gov/forecasts/aeo/>

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## River & Snow Pack Info

- Observed Oct. stream flow at The Dalles: 129% of average.
- Observed Sept. precipitation above The Dalles: 37% of average.
- Forecast runoff at The Dalles: 97 million acre-feet, 96% of 30-year average
- Estimate of 2012-13 snow pack: NA
- Federal hydropower generation in Sept.: 7,170 aMW, 2009-2013 average: 7,350 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): Sept. 85%, 5-year average: 83%.

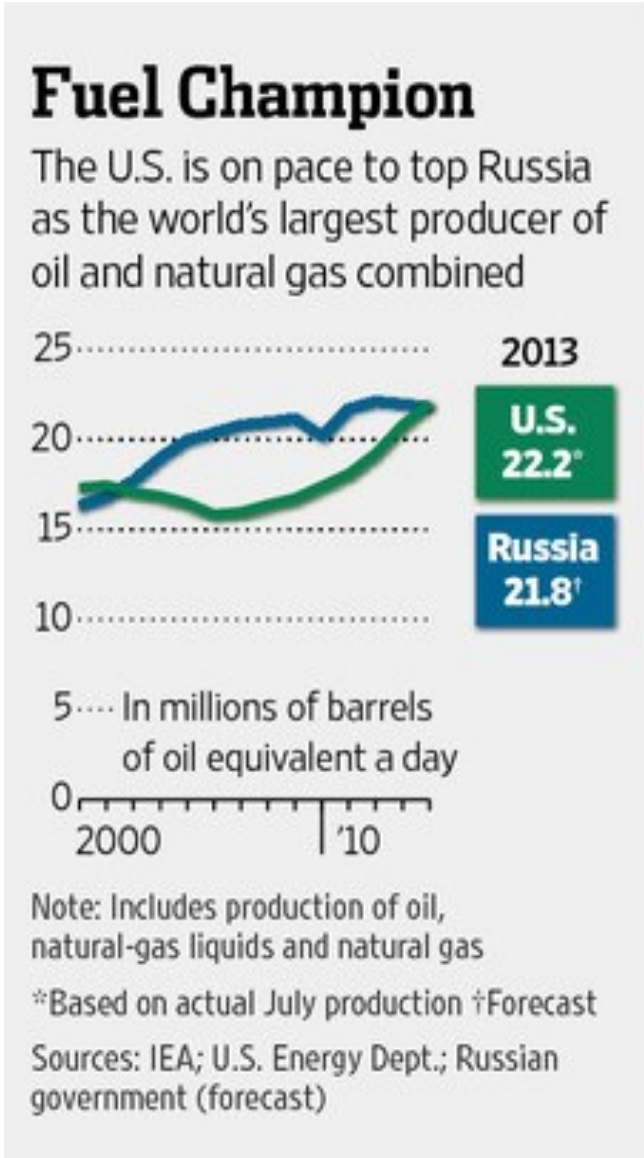
## Power Exchanged

Average flow of power during the last 30 days

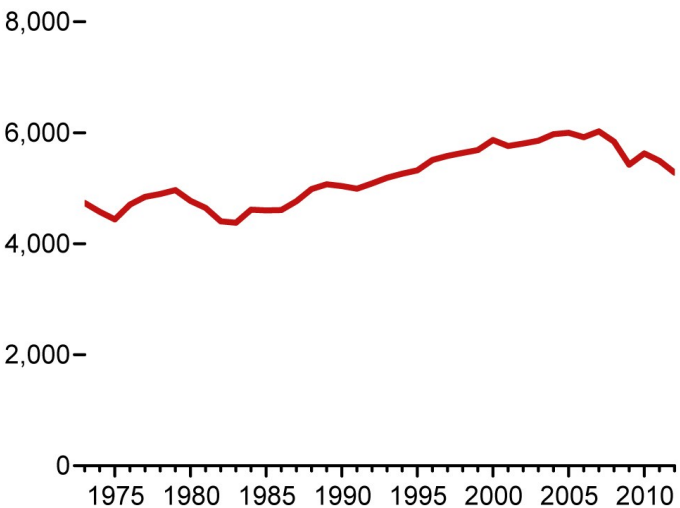
- |                            |         |
|----------------------------|---------|
| • California (exported to) | 2124MW  |
| • Canada (export to)       | 788 MW  |
| • Net power exported:      | 2912 MW |

This graph from the [new report on global warming](#) by the Intergovernmental Panel on Climate Change shows the global temperature shift relative to the average from the 1960s through 1980s when assessed decade by decade.

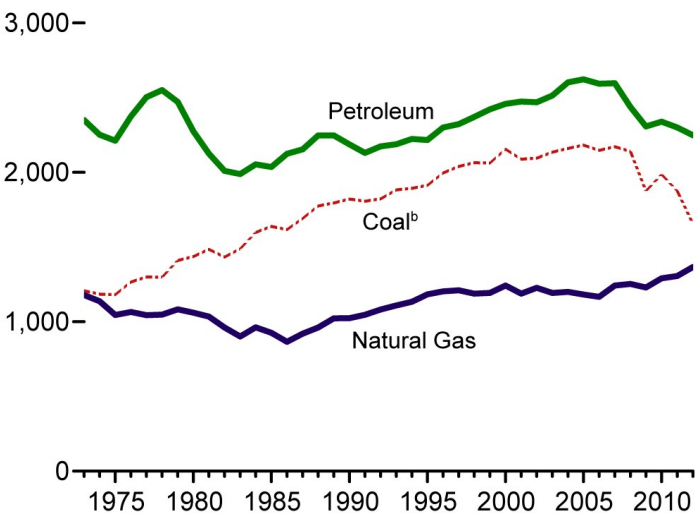
## U.S. Energy Related Carbon Dioxide Emissions: Million metric tons.



Total,<sup>a</sup> 1973–2012



By Major Source, 1973–2012



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